The role of Nutrition in Mental Health

by Dr. Nerida James

Director The Natural Healing Centre, President Narconon Melbourne

It is not widely understood that nutrition has a part to play in one's mental health. Yet there have been many studies done that indicate mental health conditions are caused by a combination of "physical" and "psychological" factors and we now know that many physical factors can have a profound negative effect on mental health, contributing to and predisposing mental illness including anxiety, depression, ADHD, bipolar disorder and even schizophrenia. Therefore, addressing and alleviating the physical contributing factors assists the person to address and handle the psychological aspect of the problem.

Correct nutrition is vital to health and wellbeing. All the organs in the body rely on the correct nutrients to function at their optimum levels. Nutrients (vitamins, minerals, fatty acids, amino acids, and glyconutrients) can increase or decrease the levels of important chemicals in the body as well as influencing hormonal balance, toxicity, immune function, inflammation and the blood's coagulability.

A deficiency of any single nutrient can alter brain function and lead to depression, anxiety and other mental disorders (Encyclopedia of Natural Medicine).

The brain is perhaps the most delicate organ in the body, using as much as 30% of all the energy we derive from food. Actually, the brain operates like a chemical factory that constantly produces dozens of neurotransmitters, which act as messengers to start, continue or stop biochemical processes. Certain of these neurotransmitters also influence our moods. The only raw materials for these processes are vitamins, minerals, amino acids, fatty acids, and other nutrients.

Emotional disturbances and Biochemical Imbalance

Research has shown that biochemical imbalances occur in the body's nervous system and hormonal levels when there is emotional disturbance and distress.

Recurring patterns of a number of biochemical factors have been identified in individuals who report experiencing symptoms related to anxiety, depression, ADHD, eating disorders (anorexia and bulimia) and other mental or behavioral conditions.

For instance, common biochemical imbalances (including nutritional deficiencies) related to depression and anxiety which have been observed in clinical practice are:

- Decreased availability of neurotransmitters such as Serotonin, Dopamine, Norepinephrine, GABA and acetylcholine
- Increased levels of toxic neurochemicals
- Lower levels of Magnesium, Zinc or Potassium
- Deficient levels of vitamins such as B5, B6, B9 (Folic Acid), B12

- Undersupply of key cofactors i.e. amino acids

We also now know that there are 4 neurotransmitters (brain biochemicals that include hormones etc.), which physically affect our frame of mind. When we have enough of all four our emotions seem to be stable. These neurotransmitters are:

- Dopamine (norepinephrine/epinephrine): a hormone that is essential to the normal nerve activity of the brain. It acts as a natural energizer and mental focuser
- GABA: an amino acid occurring in the central nervous system, associated with the transmission of nerve impulses. It acts as a natural sedative.
- Endorphin: a protein substance in the brain. It acts as a natural painkiller.
- Serotonin: an amino acid (amine) that works in brain chemistry. It acts as a natural mood stabilizer and sleep promoter

Toxic substances and overloads also create biochemical imbalances, causing depression, and should be tested for if the depression is unexpected and without apparent reason. Additionally, the presence of heavy metals (lead, cadmium, mercury) can inhibit thyroid function. The thyroid produces hormones used to regulate blood calcium levels and the central nervous system. Prolonged organic or synthetic toxicity robs the body of nutrients.

Vitamin and mineral deficiencies have a key part to play. For instance, during stressful periods the need for certain nutrients may increase and our body's stores can become depleted, or toxic substances can leach certain nutrients from the body leaving a deficiency. Our regular food intake may be inadequate to combat what ails us. If a deficiency sets in various illnesses can result.

Below is a list of certain vitamins, minerals and amino acids with some of the clinical studies showing their effect on wellbeing:

- Zinc: Deficiency may cause anorexia, loss of libido and fatigue, all of which suggest depression and respond to zinc replacement (Tasman Jones C. Zinc deficiency states. Adv Intern Med 26:97-114, 1980). Children with zinc deficiency are irritable, tearful and sullen. They are not soothed by close body contact and recent disturbances. (Moynahan EJ. Zinc deficiency and disturbances of mood and visual behavior. (Lancet I:91, 1976)

- Folic Acid or B9: Folate deficiency is associated with a wide variety of psychiatric symptoms including depression as well as with neurologic symptoms of weakness, numbness, stiffness and spasticity, both with or without muscular atrophy (Howard JS. Folate deficiency in psychiatric practice. Psychosomatics 16:112-115)

- Vitamin B6: Is commonly low in people who are depressed. This is particularly true in people taking birth control pills or estrogen in any other form as estrogen blocks the activity of B6.(Melvyn R. Werbach, M.D., Nutritional Influences on Mental Health 2nd Edition. Depression:234)

- B12: Early manifestations of B12 deficiency may include depression, generalized weakness, fatigue, indigestion and diarrhea. (Goodman KI, Salt WB 2nd. Vitamin B12 deficiency. Important new concepts in recognition. Postgrad Med 88(3): 147-50, 1990). Depression is common among patients with a vitamin B12 deficiency syndrome (Melvyn R. Werbach, M.D., Nutritional Influences on Mental Health 2nd Edition. Depression:238)

- Magnesium: A critical mineral used in sending messages along the nerves. Mild deficiency is commonly associated with anxiety. (Seelig MS, Berger AR, Spieholz N. Latent tetany and anxiety, marginal Mg deficit and normocalcemia. Dis Nerv Sys 36:461-4, 1975) Children with chronic magnesium deficits may be characterized by excessive fidgeting, anxious restlessness, psychomotor instability and learning difficulties in the presence of a normal IQ (Durlach J. Clinical aspects of chronic magnesium deficiency, in MS Seelig, Ed. Magnesium in Health nad Disease, New York, Spectrum Publications, 1980)

- Amino acids: Are the building blocks that make up protein. One form of the amino acid methionine is called SAMe.
  The most common reported effect of SAMe is mood elevation in depressed patients. (Spilman M, Fava M., S-Adenosylemethionine (Ademetionine) in psychiatric disorders: historical perspective and current status. CNS Drugs 6(6):416-25,1996).

The good news is that toxic overloads and biochemical or hormonal imbalances (including nutritional deficiencies) can be identified through a combination of lab testing and examination of symptoms. Once found, the symptoms can be alleviated through appropriate natural treatment programs and nutritional supplementation.

The real cause of biochemical imbalance

Chemical imbalance is the latest popular theory to explain what causes mental illness. You may even have heard of this term. Put more precisely, the actual condition is a biochemical imbalance that affects the nervous system. This biochemical imbalance includes hormonal fluctuations and imbalance as part of its cause (produced by the endocrine system).

However, there is no proof that chemical or biochemical imbalance is the reason for mental illness. What does seem to be true is that biochemical and hormonal imbalances do occur and that these imbalances are formed as a result of our own thoughts and emotions.

Our behavior and actions are governed by our thoughts and mental reactions to various stimuli. This gets processed through our nervous system of which the brain is a part. The central nervous system receives and interprets data. The brain initiates the body's responses by using neurotransmitters as messengers to start, continue or stop certain activities. It works like this:

You are heading home in your car, driving along on the freeway at 100km p/hr. You hear screeching tyres and the car ahead of you breaks suddenly. Your mind immediately responds with a command for your foot to hit the brakes. Instantly messages are being sent and your foot slams on the brake pedal. At the same time your brain rapidly releases neurotransmitters like norepinephrine which, in this situation, results in the production of adrenaline (a hormone). Your energy and mental acuteness instantly increase and you also start to feel nervous or tense. Your eyes widen, your palms begin to sweat, your heart is pounding. You command more action to be taken. Again, messages are sent; you check the rear vision mirror and swerve away from the car in front. You start to brace for impact. You feel totally stressed.

Luckily your car misses the car that has stopped in front of you. As you pull over to the side of the road you have a momentary feeling of disorientation and mild shock. You can't believe it. Your mind goes blank and you stare out the window. At this point the brain redirects the blood and all the nutrients to the vital organs. Your hands start to tremble and you feel weak. To combat this you force you attention outward and start to get angry. The brain again releases neurotransmitters to produce adrenaline and you get out of the car ready to do battle with the person who almost caused this accident. However you tell yourself to be calm and that the accident has been avoided. Your body feels tense though and you still feel nervous, so you take a deep breath and exhale. You tell yourself that you are lucky and your mood begins to lift. As you get back in your car and drive away the chemicals in your brain begin to re-balance, hormones stop being produced and along with the body's biochemistry, your thoughts eventually come back to a normal state.

This is an example of both the mind and body's immediate response to a perceived stressor. In the normal course of living we encounter many different stressors. A stressor by definition must contain something that is counter to survival.

Our immediate response to a stressor involves all our senses and affects both mind and body. This becomes destructive to our mental and subsequently physical wellbeing only when the stressor(s), and the body's ensuing response(s) to them, persist over time.

Suppose, for instance in the above example, every time you drive somewhere and hear the screeching of breaks your heart rate goes up and you begin to feel nervous. The

nervous behavior recurs so often that it begins to affect your outlook on driving and your response to other drivers also alters. Driving ceases to be a joy.

This is how behavior and it's physical response can become "wired in", causing a continual release of chemicals from the brain, triggering different responses in other parts of the body and depleting the body's overall nutritional reserves. As we make our way through life and more stressors accumulate, life becomes increasingly difficult and we experience feelings of exhaustion, anxiousness, irritability or even depression.

Treating a biochemical or "chemical" imbalance

The medical community, with its emphasis on all things physical, has endorsed managing chemical imbalance through prescription drugs. But these drugs never truly correct the condition; they only alter or suppress the brain's chemistry. Once withdrawal is attempted the condition comes back, often worse than before. The true condition stays in place because the drugs only target the chemical imbalance, which is an effect and not the underlying cause of the problem. Additionally, synthetic drugs have been shown not to work in over ½ of cases and produce side effects that may have both physical and mental repercussions of disastrous proportions. From my own clinical experience and observation in helping patients to withdraw off drugs, these medications cause such a suppression of the central nervous system that over the course of time higher doses or a mixture of drugs need to be given to achieve the same results. This in turn results in toxic overload and a downward spiral.

Of particular concern is that no one seems to know what the result of long-term psychotropic drug use will do to a person's health and longevity. From that perspective, this has all been one big experiment.

Compare this to a more natural and humane alternative that assists in handling the fundamental problem. Today the knowledge that has been used to cure ills for thousands of years is backed up using modern scientific methods, while treatments and remedies still come in a form sympathetic to our own body's biological makeup. They do not have the same serious side affects and in many cases are shown to be as or more effective. Nutritional supplementation is a valid form of treatment, with plenty of clinical studies to support this claim. However, addressing the mental factors that caused the physical problem to occur in the first place should also follow any physical treatment.

There are many options available these days. The first step is always to get informed.

Interesting websites:

Safe Harbour: www.alternativementalhealth.com
Interesting website with heaps of information and articles on different natural alternatives to mental health problems

Anxiety and Depression Solutions: www.anxiety-and-depression-solutions.com
See articles on alternative medicine and health

Health Research Institute & Pfeiffer Treatment Centre: www.hriptc.org
A non-profit medical treatment & research organization that specializes in nutrient therapy for biochemical imbalances

Holistic Living: www.1stholistic.com
Go to Nutrition, Vitamin & Diet Infocentre. Simple and informative.

Narconon: www.narconon.com.au
An effective and comprehensive program for getting rid of toxic chemicals, radiation and drugs from the body

Life Improvement Centre: www.lifeimprovementcentre.com.au
Offer the Purification Program to handle toxic overload and radiation. Services also include counselling and short courses on improving conditions in one's life.

Recommended Reading:

Dianetics: The Modern Science of Mental Health by L.Ron Hubbard
The longest selling bestseller on self-help. The only guide to the mind. Videos and CD's are also available

Clear Mind Clear Body by L. Ron Hubbard
Explains how toxins, radiation and drugs affect our body and mind

Say Goodbye to Illness (3rd Edition), Dr. Devi S. Nambudripad, D.C., L.Ac., R.N., Ph.D.